

DETAILED ACTION

Status of Application

By amendment filed December 9, 2008, claim 1 has been amended. Claims 11 through 20 have been withdrawn from consideration as being a nonelected invention. Claims 1 through 20 are currently pending.

Response to Arguments

1. Applicant's arguments, see 8-9, filed December 9, 2008, with respect to the rejection(s) of claim(s) 1-10 under 102(b) and 103(a) have been fully considered and are persuasive in view of the amendment. Therefore, the rejections have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the previously presented prior art and case law.
2. Furthermore, applicant's arguments concerning the rejection of claim 8 are not persuasive in that the rejection was not made because of inherency but because of obviousness. As was discussed in the previous office action Kummer et al teaches that the first sprayer used for locally spraying has a pressure of 6 bar and the second sprayer used for widely spraying has a pressure of 40 bar. Thus it would have been obvious to one having ordinary skill in the art that any third sprayer that provided a spray with an intermediate distribution between the locally spray and the wide spray would thus have an intermediate pressure which would be between the pressure of the local spray and the pressure of the wide spray.

Claim Rejections - 35 USC § 103

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kummer et al (German Patent Publication No. DE19854760).

Regarding claim 1, Kummer et al teach a method of forming a protective layer (removable surface protection, see translation), comprising the steps of applying liquid material to an object from a sprayer mechanism of a coating device and drying said liquid material to form a peelable protective layer, wherein said sprayer mechanism sprays said liquid material such that said liquid material is distributed locally at a position close to an edge of said object, and distributed widely at a position away from said edge of said object (see Figure 2, wherein nozzle 8 distributes liquid locally and nozzle 7 distributes widely).

Kummer et al does not however teach that the liquid is distributed locally and widely simultaneously but generally, no invention is involved in the broad concept of performing simultaneously operations which have previously been performed in sequence. *In re Tatincloux*, 108 USPQ 125

Thus it would have been obvious to one having ordinary skill in the art to distribute the liquid material of Kummer et al locally while simultaneously distributing the liquid widely.

Regarding claim 2, Kummer teaches that the coating device is a robot, said sprayer mechanism is attached to an arm of said robot, and said object is a vehicle body (Robot 3, arm 6, vehicle 4 of Figure 2).

Regarding claim 3, the sprayer mechanism of Kummer comprises a plurality of sprayer mechanisms (side arms and top arms with multiple nozzles), and said coating device comprises a plurality of coating devices corresponding to said sprayer mechanisms, said coating devices are robots, said sprayer mechanisms are attached to corresponding arms of said robots, and said object is a vehicle body.

Regarding claim 4, Kummer teaches the use of movable arms 6, with first and second sprayers 7 and 8, and therefore teaches that the sprayer mechanism comprises a first sprayer and a second sprayer which are placed in parallel on an arm of said coating device, said method comprising the step of moving said first sprayer close to said edge and moving said second sprayer away from said edge, and when said liquid material is sprayed from said first sprayer and said second sprayer towards said object, said liquid material is distributed locally from said first sprayer, and said liquid material is distributed widely from said second sprayer.

Regarding claim 7, Kummer teaches that the spray pressure of liquid material from the first sprayer (here, sprayer 8 which sprays locally at the edge at 6 bar) is smaller than that of the second sprayer (here, sprayer 7, which sprays widely away from the edge at 40 bar).

5. Claims 5-6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kummer et al as applied to claim 4 above, and further in view of Komon et al (U.S. Patent # 4,578,290).

The teachings of Kummer et al as they apply to claim 4 have been discussed previously. However, Kummer et al fail to teach the use of a middle sprayer with the required intervals and pressures.

Regarding claims 5 and 6, Komon et al teach a coating apparatus with first, middle, and second sprayers (nozzles 1, 3 and 4 of figure 1) which result in improved coating without unwanted spots or "tails" of film (see Abstract). The outer nozzles are inclined and the nozzles are spaced at increasing intervals, as required by claim 6 (see column 4, lines 16-22), so as to distribute liquid locally at the edge near first sprayer (nozzle 1), more widely from the middle sprayer (nozzle 3), and most widely from the second sprayer (nozzle 4).

Regarding claim 8, as discussed previously in the claim 7 rejection, Kummer et al teach the use of more pressure to the second sprayer which distributes liquid widely away from the edge and less pressure to the first sprayer which distributes liquid locally at the edge. Thus Kummer et al teaches that sprayers that distribute a liquid widely require more pressure than sprayers that distribute a liquid locally. Thus it would be obvious to one having ordinary skill in the art that any sprayer that distributed liquid in an intermediate distribution between the first and second sprayer of Kummer et al would require an intermediate pressure as well.

Thus it would be obvious that the use of the middle sprayer of Komon et al to provide an intermediate distribution of liquid between the first and second sprayers would require an intermediate pressure as presently claimed.

It would have been obvious to one of ordinary skill in the art at the time the present invention was made that the coating apparatus of Komon et al could be combined with that of Kummer et al because both tools are used for coating vehicle bodies. One would have been

motivated to combine the teachings of these references and arrive at the present invention in order to benefit from the improved coating provided by Komon et al.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kummer et al in view of Komon et al as applied to claim 5 above, and further in view of Muruyama et al (U.S. Patent # 5,645,895).

The teachings of Kummer et al in view of Komon et al as they apply to claim 5 have been discussed previously however Kummer in view of Komon fails to teach the use of multiple middle sprayers.

Muruyama et al teach the use of multiple-sprayer mechanism, which includes two middle sprayers between outer first and second sprayers, to coat an automobile body (see Figure 2 of Muruyama et al). It would have been obvious to one of ordinary skill in the art at the time the invention was made that the apparatus of Muruyama et al could be used with that as taught by Kummer et al in view of Komon et al as all three teachings are drawn toward coating automobiles. One would have been motivated to combine the teachings and arrive at the present invention in order to gain a wider working area and more coating control as would be provided by the use of multiple sprayers.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kummer et al as applied to claim 1 above, and further in view of Bederke et al (U.S. Patent # 5,698,330).

The teachings of Kummer et al as they apply to claim 1 have been discussed previously; however Kummer et al fail to specify that the liquid contains acrylic copolymer as a main component. However, it is noted that the liquid is an aqueous polymer dispersion.

Bederke et al further teach that acrylic copolymers are useful as automobile coatings (Abstract). The resulting coating has a high corrosion resistance. It would have been obvious to those of ordinary skill in the art at the time of the present invention that the coating composition of Bederke et al could be used as the coating taught by Kummer et al. One would have been motivated to combine the teachings of these references and arrive at the present invention in order to provide the increased corrosion resistance as taught by Bederke et al.

Conclusion

Claims 1 through 10 have been rejected. Claims 11 through 20 have been withdrawn from consideration as being a non-elected invention. No claims were allowed.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Wieczorek whose telephone number is (571)270-5341. The examiner can normally be reached on Monday through Friday; 7:30 AM to 5:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on (571)272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MPW/

/Michael Wieczorek/
Examiner, Art Unit 1792

/Michael Cleveland/
Supervisory Patent Examiner, Art Unit 1792